This hypothesis & time: significance next tests; pitfalls

Today: LN pp. 1 to 162, read LN pp. 1-174, to 185 (AMS 57)

no DD office hour 0
This afternoon: schedule to next Wed 1.15-2.15 pm

95% CI for μ
24.4, 25.0, 25.6
24.3°C not in 95% CI, so theory not supported by data (at 95% confidence level)

SE 0.2°C

long-run hist. (*)
twist type of y if null true

24.3°C 25°C accounting for μ
no curve uncertainty in σ

\[ \frac{25.0°C - 24.3°C}{0.27°C} = +2.59 = t \text{ statistic} \]
if \( p \text{ is small,} \)

null doesn't look good at all.

\( \text{A: unsatisfactory} \)

answer: \( \text{if } p \leq 5\%, \text{ reject null} \)

\( \text{stats:} \text{ diff between } m_0 \text{ and } m \)

\( (100 - 95\%) \)

if \( p \leq 1\%, \) highly stats \( \text{ (reject null)} \)
<table>
<thead>
<tr>
<th>Null: $\mu = \mu_0$</th>
<th>2-sided alternative</th>
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</thead>
<tbody>
<tr>
<td>alt: $\mu \neq \mu_0$</td>
<td>2-tailed p-value (in both tails)</td>
</tr>
<tr>
<td>null: $\mu = \mu_0$</td>
<td>1-sided alt. $\mu &gt; \mu_0$</td>
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<tr>
<td>alt: $\mu &gt; \mu_0$</td>
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